

WELL SUMMARY

page 1 of 3Location ID: BLM-14-327 Field Representative(s): M. Canavan/D. Menzie/G. ContaldoDate Started: 08/30/90Date Completed: 09/27/90Northing: 228060.48Easting: 410112.62Brass Cap: 4675.54 Outer Casing: 4676.26 Inner Casing: 4676.73Drilling Method: Mud/Air-Foam RotaryDrilling Contractor: Larjon Drilling Co.Driller: J. GowerTotal Depth Borehole: 355'Total Depth Well Casing: 342.76'Total Depth Surface Casing: 75'Diameter Well Casing: 4"Diameter Surface Casing: 10"Length of Bottom Blank: 5.34'Type of Screen: Extra Strength 0.02 slotScreen Interval: 327' to 337.42'Water First Detected: 312' Water Level Open Borehole: 258.10'(TSC)Water Level Cased Borehole: 270.59'(TOC)Quik-Foam Use: 6 gallons

Estimated Water Use: 7,200 gallons

Well Casing:

4in x 3ft SCD 40 PVC:

4in x 5ft SCD 40 PVC:

4in x 10ft SCD 40 PVC:

4in x 20ft SCD 40 PVC:

Total SCD 40 PVC pipe: ft

stock SS centralizers:

custom SS centralizers: 4

4"x2' SS locking riser: 1

4" SS locking cap: 1

4" SS female cap: 1 2 ft

ASTM male adaptor: 3

Johnson male adaptor: 3

4in x 3ft SCD 5 SS pipe: 2

4in x 5ft SCD 5 SS pipe: 1

4in x 10ft SCD 5 SS pipe: 2

4in x 20ft SCD 5 SS pipe: 15

Total SCD 5 SS pipe: 331 ft

4in x 5ft SCD 10 SS pipe:

4in x 10ft SCD 10 SS pipe:

4in x 20ft SCD 10 SS pipe:

Total SCD 10 SS pipe: ft

Well Completion:

100# bags 16/40 sand:	16	bags
100# bags 10/20 sand:		bags
100# bags 8/14 sand:		bags
100# bags 8/20 sand:	21	bags
94# bags cement:	97	bags
5 gal. buckets bentonite:		buckets
50# bentonite powder:	10	bags
Benseal:	1	bags

Surface Casing:

94# bags cement:	60	bags
50# bags bentonite powder:	6	bags
Water:	507	gallons

*Ready for**3.5.90*Pertinent Field Notes:

08/30/90 Drilled from 0'-75' using mud rotary with 12 1/4" bit (pilot hole). Reamed pilot hole from 0'-35' using mud rotary with 16" bit. Used 1,200 gallons of water. - Contaldo

08/31/90 Continued reaming, from 35'-75' using mud rotary with 16" bit. Used 1,000 gallons of water. Installed 10" diameter surface casing to 75'. Grouted surface casing. - Contaldo

09/10/90 Steam clean/mobilize BE rig and other drilling equipment to BLM-14, drill air-foam rotary with 9 7/8" tricone mill tooth bit from 75' to 190', used 800 gallons water. - Menzie

09/11/90 Drill air-foam rotary 190'-280' with 9" air hammer. Encountered rhyolitic tuff bedrock at 270'. - Canavan

09/12/90 Drill air-foam rotary 280'-330'. Formation apparently making water 305'-310'. - Canavan

09/13/90 Measured water level in open bore hole at 255.23' (top of deflector), drilled air-foam rotary 330'-355', blew hole for 45 minutes but could not blow dry. Tripped out, let recover for 60 minutes and couldn't get reliable measurement (238') due to foam. - Menzie

09/14/90 Southwest Surveys ran standard suite of logs plus drift for BLM-14. Designed well and installed bottom Benseal plug. Bottom of borehole sounded at 351.75'; water level at 258.1'. Ran 15' of casing plus 10' screen into surface casing. - Canavan

09/17/90 Installed remainder of casing and completion materials to top plug. Total depth of well casing = 342.76'. Screened interval from 327.0' - 337.42'. Top of bottom plug at 347.0'. Top of 16/40 sand at 342.80'. Top of gravel pack (8/20 sand) at 320.67'. Top of 16/40 sand at 313.67'. Top of top plug 307.5'. - Canavan

09/18/90 Installed 1:1 ratio 8/20:16/40 filter sand from 307.5' - 245.17'. SWL at 255.1' installed first load of grout. Bailed to check for grout invasion. - Canavan

09/20/90 Poured second load of grout 80' to ground surface. - Canavan

09/21/90 Surged and bailed BLM-14 20 times; approximately 80 gallons water discharged. - Canavan

09/24/90 Surged and bailed well 20 times; approximately 80 gallons discharged. Set submersible pump at 336'. - Canavan

09/25/90 Pumped well for development. Approximately 691 gallons (851 total to date) discharged. See development sheet for details. - Canavan

09/26/90 Pumped well for development; approximately 150 gallons discharged (1001 total). Well is developed. - Canavan

09/27/90 Pulled pump and notified Lockheed that well is ready for sampling. - Canavan

10/15/90 Poured pad, set brass cap. - Canavan